

**METHOD AND APPARATUS FOR MAXIMIZING
DISTANCE OF DATA MIRRORS**

ABSTRACT OF THE INVENTION

The invention is a method and apparatus for mirroring and relaying computer data to improve continuity of data by maximizing the distance between two copies of the data in synchronous mode, zero data loss environments. In one embodiment, the invention uses multiple remote mirror sites to increase the distance of one copy of mirrored data from another copy of mirrored data. In another embodiment, the invention uses relays in a wide-area cascade to increase the distance of a remote mirror site from a server sending write requests. This is done without affecting system performance by allowing the server to continue performance when an acknowledgment is received from the first relay, without waiting for an acknowledgment from the remote mirror site.